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DVR Features

System Power Management

Automatically have the system reboot or shutdown at a user setting time

Auto Switching Interval

Have cameras switch display from camera 1-16 every 1-10 seconds

E-map

A grid or map of your location to show where each cameras are located, even shows if that particular camera is recording or not

TV-Out

A connection (RCA) at the back of the DVR, which can connect to a CCTV monitor or a TV to view one camera or 1-16 cameras on a 480 FPS system

On-screen Display

Can change the font style, size, and color which is displayed on the DVR main screen

POS Interface: Text Inserter

A feature if the DVR is connected to a POS system. Display the description of sales right onto the video.

Hard Disk Usage

Display the amount in percentage that the DVR data used on the Hard Disk

I-Phone

"Two Way Audio Communication"

Event Log

A report that keeps track of every changes that occur within the DVR

Camera Motion

Have the DVR detect motion within a zone, the DVR will either record and/or will create an event

Motion Sensitivity

Set the Sensitivity on how the DVR will detect a motion, from lowest to highest

Camera Object Detection

Marks all the changes that occurred from the original scene

Camera People Counting

Counts people coming and out of a certain place

Camera Mosaic

Veils restricted areas to keep regular users uninformed

GUI INTERFACE

What DVR Lets You Do All of This?

Your Choice of Interface

Light Edition



Dark Edition



Multi-DVR for Connecting to Multiples DVRs



Camera P/T/Z

Using a PTZ camera, our system supports nearly 40 different protocols. Pan Tilt Zoom control built right into the camera. You can control the camera online or onsite. Control Includes: Preset, Touring, Light, Zoom, IRIS, Focus, Speed, Auto, Move Left to Right 360°, & Move Up to Down.

Data Retain

Retains or keep data only for the period set. If set for 10 days, the system will delete all previous data before 10 days regardless of the capacity remaining in the Hard Disk.

Output Device

DVR system can be equipped with as many as 8 output devices. "Manual Alarm" can control these output devices.

Input Device

DVR system can be equipped with as many as 16 input devices. Each and every input can be tuned independently.
Signal Types: NO and NC.

Audio

DVR system can be equipped up to 8 audio channels, record audio to any camera that it is assigned to.

Alert

Alert is the beep inside the system that sounds in the case of event. See Events for more details.

Event

Consists of 3 different groups: input, motion detection and no video signal, can be linked to another or different event. Example: Input1 will activate output1.

Scheduled Recording

The DVR system can be setup to record on motion, to have the DVR record 24 hours, or not record but to watch only.

Recording Frame Rate

Record video by frame per seconds

Recording Resolution

Record video size: 320 X 240, 640 X 240, or 640 X 480, the larger the resolution, the better the resolution.

Recording Quality

Record video with different quality settings, from lowest to highest.

Pre-Alarm

Record video before an event occurs, example if set for 5 seconds, there will be a recording of 5 seconds before an event; to see what happen 5 seconds before the event occur.

Post-Alarm

Record video after an event occurs

Camera [Manual Recording]

If you are in watch mode, you can have the DVR start recording manually and stop manually.

Network

DVR supports port forwarding behind a router, setup maximum of users, change transmitted video quality over the network, bandwidth that the DVR is limited to, setup a Web Server and its' port, report forwarding to a central station, email on a event, and dial alarm on an event to any number.

Web Server

Can view the camera live with just internet explorer from anywhere around the world

DVR Client Software

Can connect to DVR server and take full control or view live camera from anywhere around the world

Central Station

Setup a central station where DVRs will report on an event

E-mail

Automatically send an email message whenever an event occur

Dial Alarm

Dials a phone number whenever an event occurs

Playback Speed

Plays 22x backwards, real-time, 22x forward, move 1 frame backward, & move 1 frame forward

Playback Object

Playback recoded video where objects changes within the scene

Go To & Calendar

Type in the exact time and date to playback recorded video

Save AVI

Save recorded to AVI format

Save BMP (Watermark) or JPEG

Save an image with watermark, hard proof no tamper. Save an image in JPG format not hard proof, but smaller size

Watermark Proof

Checks if certain saved images are forged or not

Back DFS format

Back from 1-16 cameras at a selected time interval and export to an encrypted file, software playback must be installed to view video

Backup EXE format

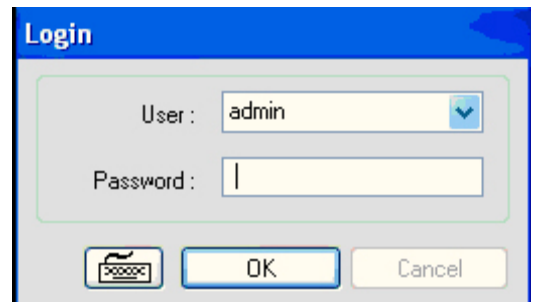
Back 1 camera at one time and at a selected time interval to a exe file, with this format you don't need to install any software in any computer that is used to play video

Main System Application

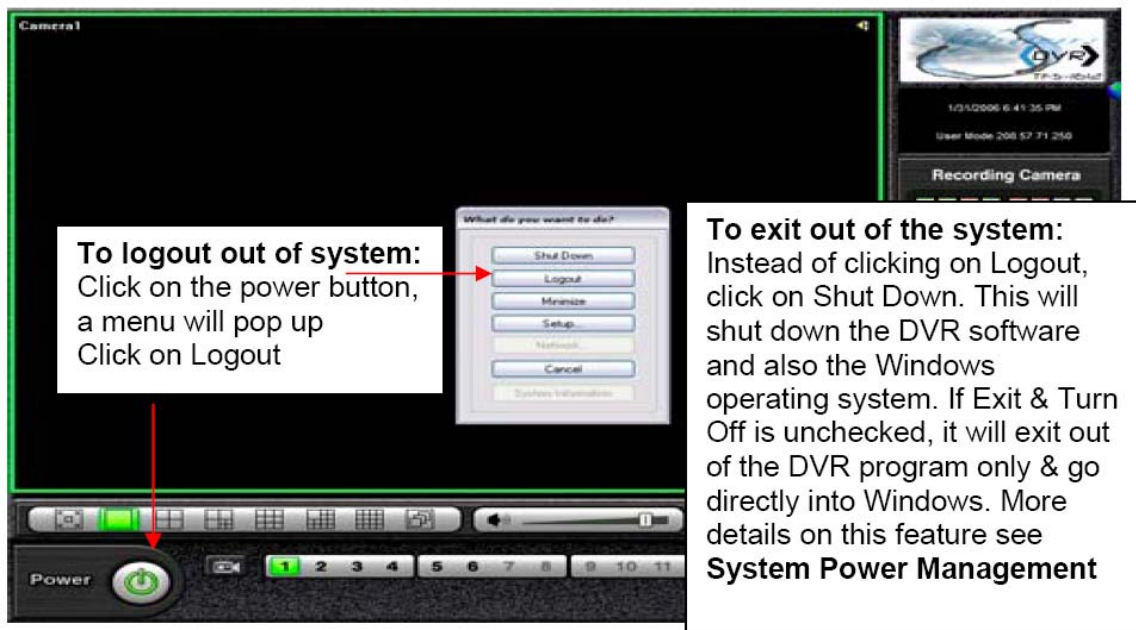
Startup Screen (Section 1)

1.1 Login

The default values for User and Password are “**admin**” and “**1234**”. Click “OK” to execute DVR system. To give “admin” a password and to create new users, certain configurations are required (see section 3.5). Only “admin” and users with appropriate administrator rights have access to the Setup menu.
Note: Virtual keypad is available wherever typing is required.



1.2 Power Button (Only Admin Rights Will Display: Shutdown)



1.2.1 Shutdown

With admin rights, shutdown will shut down the DVR software, no recording will occur. This will also shutdown the Windows operating system if “Exit & Turn Off” is checked, unchecked will only go directly into Windows. More details on this feature see section 3.1.1 **System Power Management (Exit & Turn Off Computer)**

1.2.2 Logout

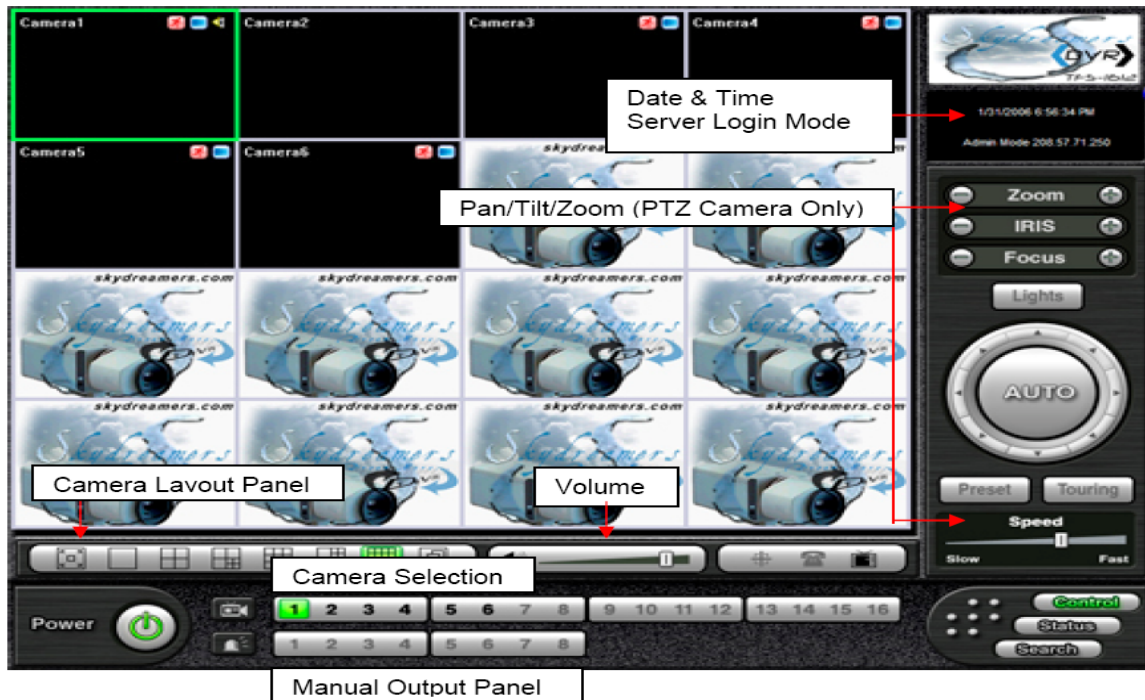
Click on the Power button, a menu will pop up, click on Logout

1.2.3 Exit Program to Operating System

Instead of clicking on Logout, click on Shut Down. This will shut down the DVR software and also the Windows operating system. From there you can make changes to the operating system but not highly recommended; this can cause the operating system to become corrupted.

Control Screen Layout (Section 2)

2.1 Control



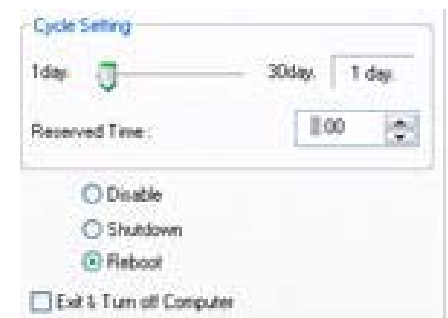
SETUP (Section 3)

To get into the setup screen, click on the power button and click on Setup from the pop-up menu

3.1 System Tab

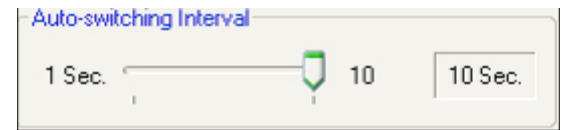
3.1.1 System Power Management

- Cycle Setting: Amount of days for system to reboot or to shutdown.
- Reserved time: Set the exact time for system to reboot or shutdown.
- Disable: selected when System Power Management is not to be used. NOT RECOMMENDED
- Shutdown: Select to have system shut down at the time set.
- Reboot: Select to have system reboot at the time set.
- Exit & Turn off Computer: Uncheck, will exit DVR software and go directly into windows instead of powering down the system.



3.1.2 Auto-Switching Interval

Auto-switching Interval is a function that allows Green Square around selected camera to move to the next one at the interval set. e.g.) Camera 1 -> 10 sec. -> Camera 2 -> 10 sec. -> Camera 3....

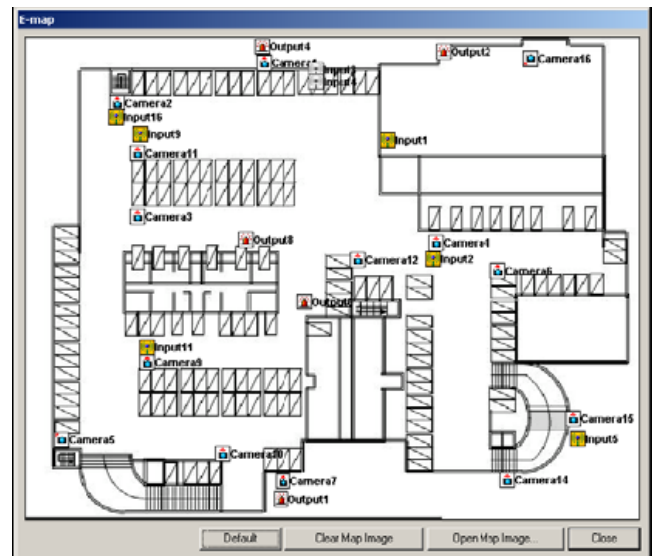
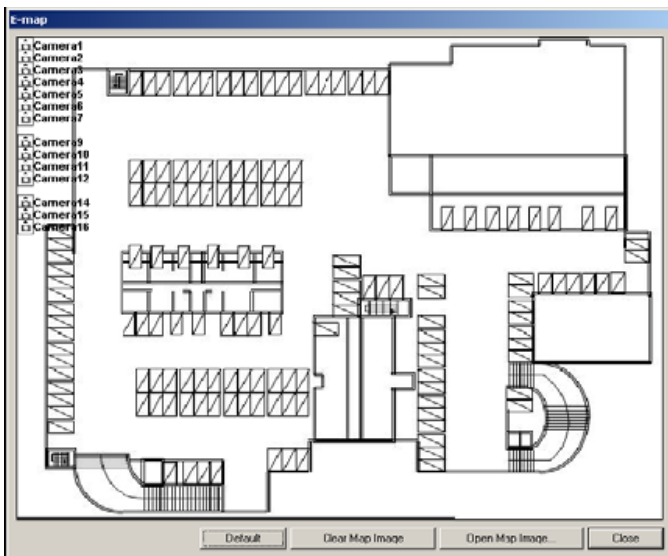


3.1.3 E-MAP

Click on the “E-map” button to design E-map. Click on “Open Map Image” to select an image. You can create maps from Visio or other programs, just save the file as a picture file.



The above is a designed E-map sample. Drag mouse to position Camera/Input/Output and design E-map.



3.1.4 TV-OUT

TV-OUT is a function that sends selected cameras to a call monitor (external analog monitor). Click on the “TV-OUT” button for setup.



Same as Server Screen Mode

(For 480FPS only) - TV-OUT Monitor displays what's on DVR server.

Manual Channel Selection

Channels are selected manually, once “Manual Channel Selection” is selected, channels can also be selected manually on control screen by placing mouse on camera picture and clicking the right mouse.

Auto Channel Switching

Selected channels rotate to display at the switching interval set.

3.1.5 On-Screen Display (OSD)

Change font type, size, & colors for all cameras

On a CONTROL camera screen, right mouse to control OSD:

Show Camera Names and Status: By checking it, camera names and status will be displayed on camera pictures.

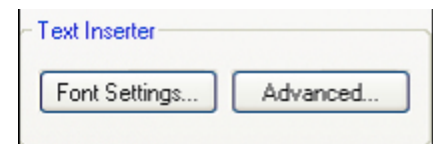


Show Motion Detection Blocks: By checking it, green motion detection blocks will be displayed on camera pictures when recording schedule is set as "M" (Setup/Schedule).

Show Object Detection Blocks: By checking it, blue object detection blocks will be displayed on camera pictures.

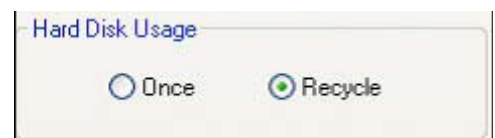
3.1.6 Text Inserter

Text Inserter is a function that allows DVR system to integrate with POS machines. Simply install "Text_Inserter_Plugin_for_POS" on DVR Server, and transactions that occur will be displayed on selected camera pictures. Transaction recording and text search are possible as well. For more detailed installation and information, please ask a SKY I SYS Representative.



3.1.7 Hard Disk Usage

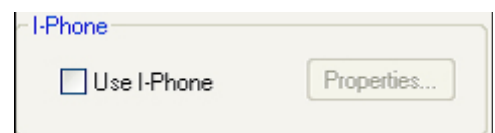
Hard Disk Usage is to select data storage method. If "Once" is selected, data will be stored up to the point where HDD reaches its maximum capacity. If "Recycle" is selected, data will be overwritten from the point HDD reaches its maximum capacity based on "First In - First Out".



3.1.8 I-Phone

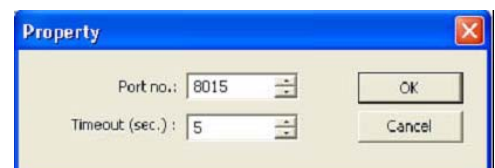
I-Phone is "Two-Way Audio Communication".

Check the box, go to Control Screen, and click on the I-Phone button for audio communication.



Port No.: The port number for I-Phone use has to be set up. Normally the default value is good to use.

Timeout: It indicates the maximum length of connection trial. If there is no response within the value set, call will be cancelled.



3.2 Device Tab

3.2.1 Cameras

Checking the boxes will enable cameras

Different resolutions and recording frame rates can set up for different cameras

Video Signal Type: Select either NTSC or PAL.

Auto Channel Scan: It automatically identifies all the active video channels. Make sure to always click and scan after S/W version change.

Default: It sets "Event Recording Frame" and "Recording Frame" as default values.

Name	Resolution	Event Recording Frame	Recording Frame
☒ Camera1	320x240	7-8	7-8
☒ Camera2	320x240	7-8	7-8
☒ Camera3	320x240	7-8	7-8
☒ Camera4	320x240	7-8	7-8
☒ Camera5	320x240	7-8	7-8
☒ Camera6	320x240	7-8	7-8
☒ Camera7	320x240	7-8	7-8
☒ Camera8	320x240	7-8	7-8
☒ Camera9	320x240	7-8	7-8
☒ Camera10	320x240	7-8	7-8
☒ Camera11	320x240	7-8	7-8
☒ Camera12	320x240	7-8	7-8
☒ Camera13	320x240	7-8	7-8
☒ Camera14	320x240	7-8	7-8
☒ Camera15	320x240	7-8	7-8
☒ Camera16	320x240	7-8	7-8

Video Signal Type: NTSC

Auto Channel Scan

Default

OK Cancel

3.2.1 Cameras (Expand Overview)

Double-Click on camera for more individual camera setup

Camera

Name: Camera1

Recording Quality: Medium

Pre-alarm: 10 Sec.

Post-alarm: 10 Sec.

Motion Detection

Sensitivity: Medium

☐ Object Detection

People Count

Zone Settings

Mosaic

☐ Use Mosaic

Mosaic Zone Settings

Data Retain

☐ Use Data Retain

Detail...

Using PTZ(Pan/Tilt/Zoom) Device

Model Name: AECD2000 / Network Korea Co.,Ltd

Camera ID: 0

Serial Port

Advanced...

5 Sec.

Using Previous State

Apply All

OK Cancel

3.2.2 Motion Detection

DVR system is designed to have unlimited motion detection zones and to have different motion detection sensitivity levels.

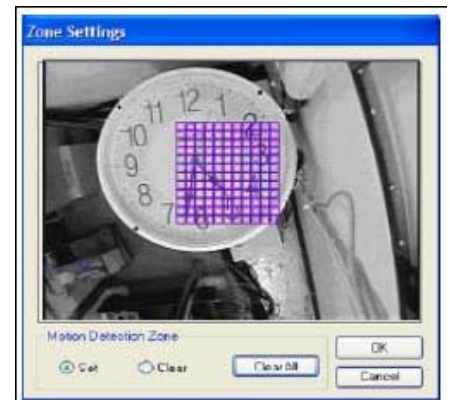


3.2.3 Zone Settings:

Select "Set", drag mouse to set motion detection zones and click "OK".

Select "Clear" to clear certain areas inside motion detection zones.

Click on "Clear All" to clear all the motion detection zones.



3.2.4 Object Detection

It is a function that marks all the changes occurred from the original scene. DVR System will detect new & missing objects after a certain period of time (detecting interval).

3.2.5 Motion Detection Zone

Set the area where you want the system to detect object changes

3.2.6 Detecting Interval

Set a time interval for the system to detect object changes

3.2.7 View Original Frame

View the original set frame

3.2.8 Set Frame

Set the frame for the objection detection to compare to when changes occur

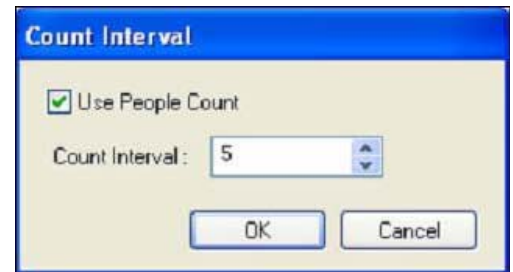


3.2.9 People Count

It is a function that counts people coming in and out of a certain place.

How to setup:

1. Click on the "People Count" button.
 2. Check on the "People Count" Button
 3. Set "Count Interval".
 4. Go to "Zone Settings and set "People Counting Zone," check the "Use People Count" box.
 5. Make sure Setup/Schedule and select "M," to setup motion recording.
 6. Go to the "Control Screen" and find the word, "Counting".
- Caution: "Object Detection" and "People Counter" cannot be used simultaneously.
 - Note: DVR will count the number from 0 again by selecting "Reset".



3.2.10 Mosaic

A function that veils restricted areas to keep regular users uninformed

How to setup:

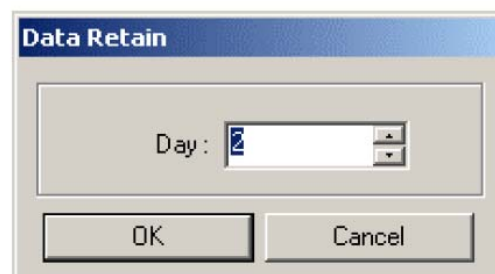
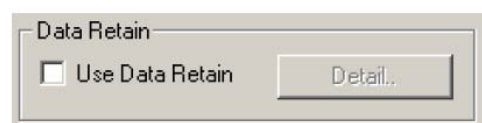
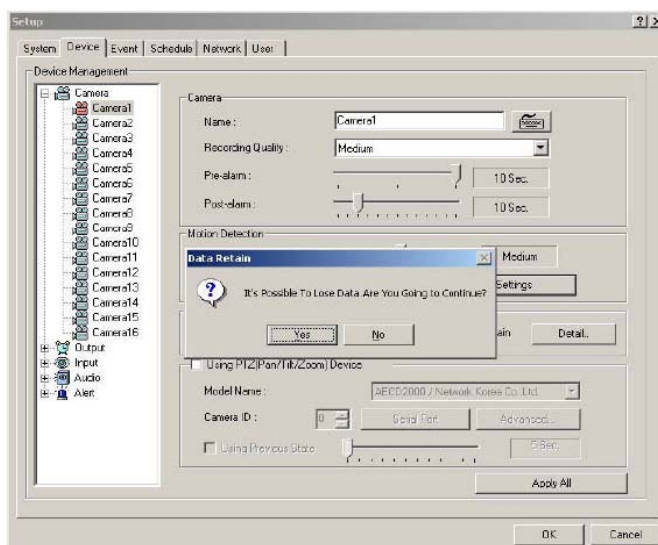
1. Tick the "Use Mosaic" box.
2. Click on "Mosaic Zone Settings".
3. Set "Mosaic Zone".
4. Go to the "Control Screen" and find veiled areas.

Note

- While using Mosaic, "Save" or "Print" cannot be performed.
- To see unveiled area, logging in as "Admin" or "Admin Mode" is required.

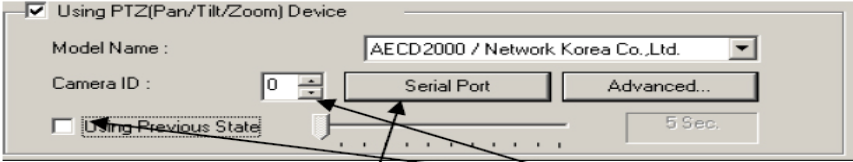
3.2.11 Data Retain

It is a function that retains data only for the period set. For example, if 10 days is set, DVR will delete all previous data before 10 days regardless of the capacity remaining in HDD.



3.2.12 Pan /Tilt /Zoom (PTZ) Camera Setup

When using a PTZ Camera, check the box and select a model name. SKYSYS DVR system supports nearly 40 different protocols.



The main dialog box shows the 'Using PTZ(Pan/Tilt/Zoom) Device' checkbox checked. The 'Model Name' dropdown is set to 'AECD2000 / Network Korea Co.,Ltd.'. The 'Camera ID' is set to 0. The 'Serial Port' button is highlighted. The 'Using Previous State' checkbox is unchecked, and the '5 Sec.' timer is visible.

The 'Serial Port Settings' dialog box shows the following settings:

- Port: COM1
- Bit per Second: 9600
- Data Bits: 8
- Parity: None
- Stop Bits: 1
- Flow Control: ☐ DTR/DSR, ☐ RTS/CTS, ☐ XON/XOFF

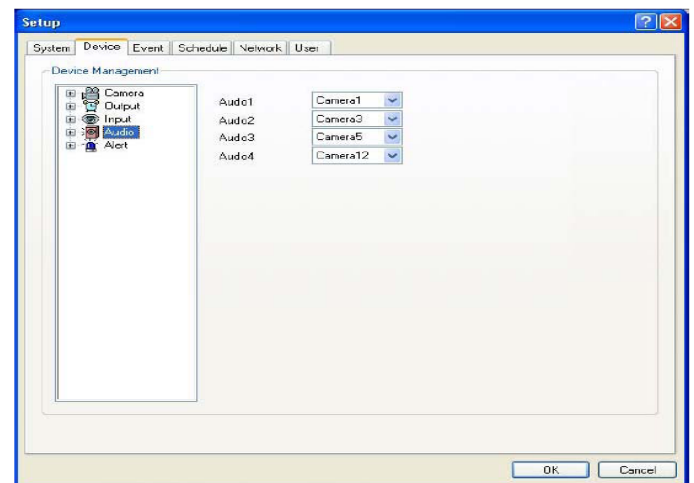
Annotations provide additional guidance:

- Camera ID: Leave it as it is if only one PTZ camera is used. Otherwise, give each camera a different number.
- Using Previous State: Tick the box and set time period to move camera back to initial position after a certain period of time.
- Select the port used for PTZ camera.
- Bit per Second: It is 9600 for most of PTZ cameras. But a few can have different values. Refer to camera manual.

Apply All: The same settings will be applied to all cameras.

3.2.13 Audio

DVR system is equipped with as many as 8 audio channels. 1 for 30FPS, 4 for 120FPS & 8 for 240FPS. Simply connect cameras to audio channels for use, and audio recording will be completed as chosen. Examples: The selections indicate that Audio2 will record to Camera 3, Audio3 will record to Camera5, etc.

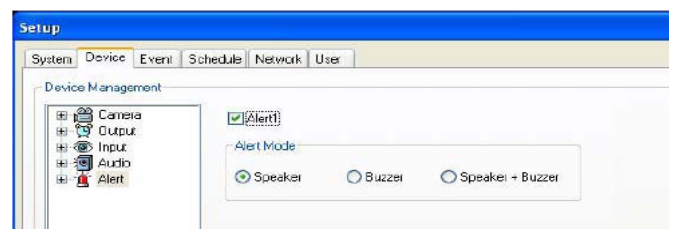


3.2.14 Audio Expand (Input Gain (1-15))

It is an audio level control similar to volume control. The higher the number, the higher in volume the audio will record.

3.2.14 Alert

DVR system is equipped with 1 alert device. Alert is the beep inside the system that sounds in the case of event. Check the box for use and select an alert mode.



3.2.15 Alert Expand (Alert1)

Name: Name given for the alert.

Length of Activation: The length of alert activation or length of the alert sound (1-60 seconds).

3.3 Schedule Tab

3.3.1 Device

Select the Camera that you want to change the time schedule.

3.3.2 Schedule

First Select the "Schedule Mode" and highlight the time & day of the week you want to change the time schedule.

3.3.3 Schedule Mode

Each camera can have different recording options; scheduled recording by time & day and selective recording.

- R: Recording at all times
- M: Recording only on motion detection
- S: Recording only on sensor detection
- H: Recording at all times and higher frame recording on sensor/motion detection

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Mon	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Tue	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Wed	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

3.3.4 Holidays

The holiday recording schedule set at the bottom of the "Schedule" table will be applied to selected dates.

3.4 Network Tab

3.4.1 DVR Server

Supported Network: TCP/IP for LAN or Cable/DSL Connection.

Port No: Port Numbers Used for Client Connections, must make on both ends: Server & Client.

Timeout: Automatic logout time in seconds for remote client in idle.

Maximum Users: Set the amount of maximum users that can be logged into the system simultaneously.

Transmitted Video Quality: Video quality to be transmitted to client. The higher video quality gets, the slower network transmission speed becomes. Therefore, it is recommended to select low video quality when using "narrowband".

Bandwidth: The maximum set bandwidth for remote connections. Make sure to select the right bandwidth to have the right network performance.

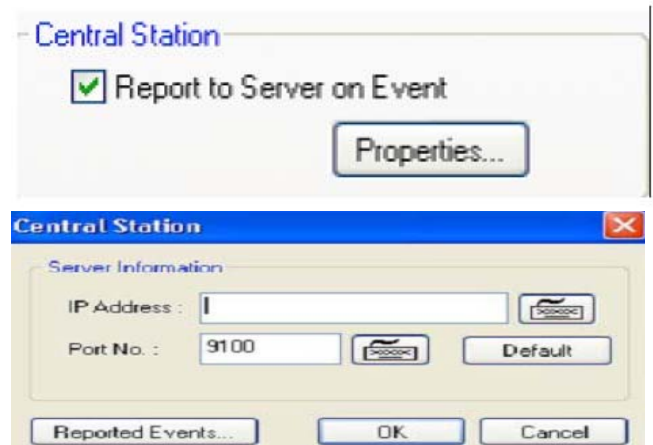
3.4.2 Web Server

This is an alternative way to connect to the DVR system to view live cameras using your internet explorer browser. You can set a fixed HTTP Port Number, default is 80. If you set any other number you must enter http://IP address" followed by colon ":" and the port number, no spaces. "**Web Login Required**" is requiring a password when connecting to the DVR Server using internet explorer browser. If the box is not checked, automatic login as "anonymous" will be executed.

3.4.3 Central Station

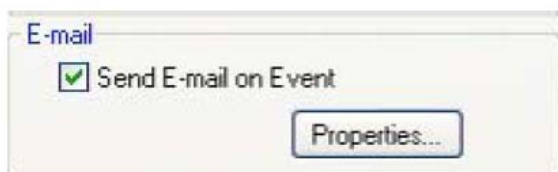
This feature allows the DVR system to communicate with a central station, giving the status of the DVR system to the central station. This will also enable clients with static IP to manage multi DVR sites.

Properties will bring you to the Server Information. Type in the IP address of Central Station Server (Static IP) and click on "Reported Events" for more setup. Choose events to report to Central Station server and set reporting time period.



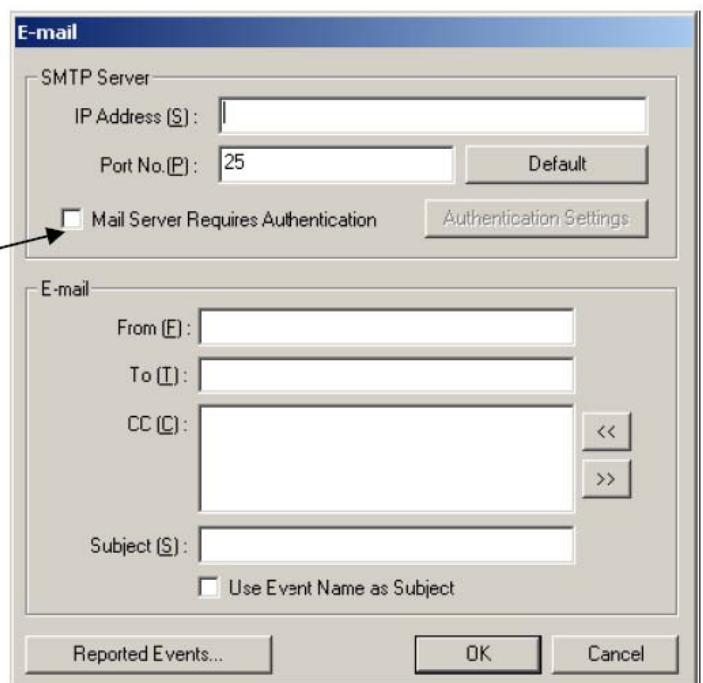
3.4.4 E-Mail

Enables DVR System to send out e-mails when selected events occur, check the box and click on properties for setup.



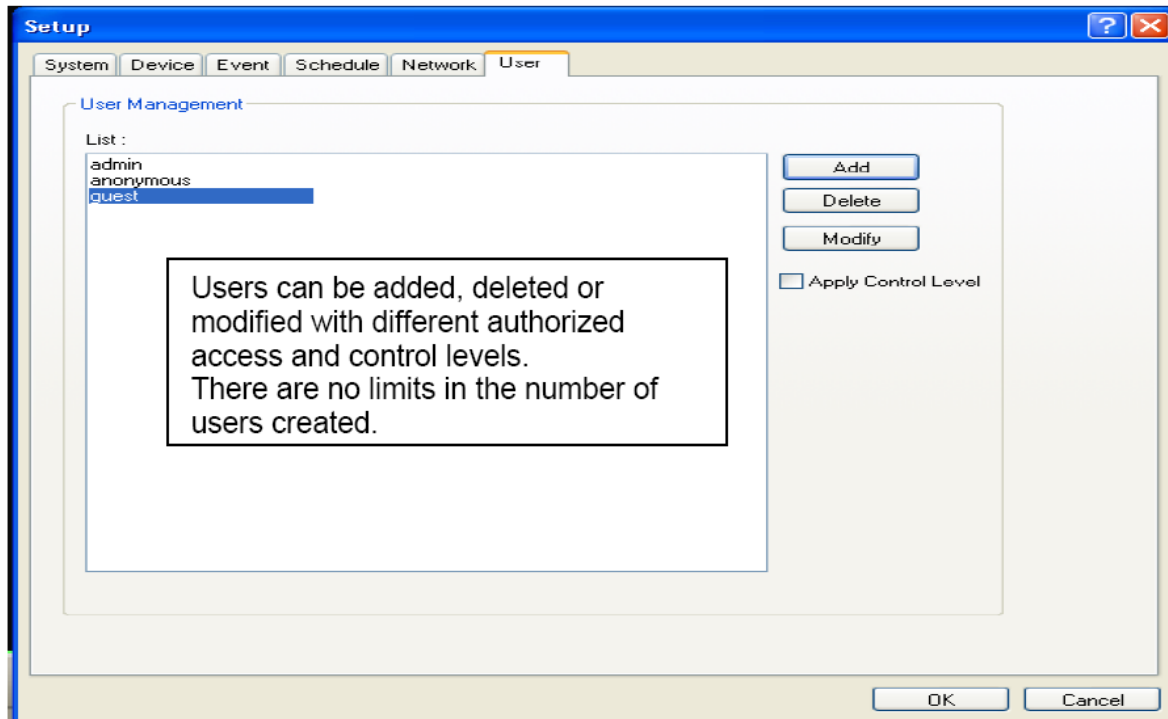
Note: Some e-mail service may require authentication for ID and PW.

Make sure to put in the right IP Address of SMTP server. Then, click on Reported Events for more setup. The Reported Events menu is the same as Central Station.



3.5 User Tab

3.5.1 User Management



3.5.2 User Settings

User / Password

Enter the desired username & password, username & password will be used to logon to the DVR system & also remotely.

The 'User / Password' form contains three input fields: 'User' with the value 'guest', 'Password' with masked characters, and 'Retype Password' with masked characters. Each field has a small icon to its right, likely for password visibility toggling.

Authorized Access

Checked functions will be allowed to access remotely. A user who can enter into setup, must be given the same authorization as "admin." Only one user with "Admin Mode" can log in remotely. Multi-access, if checked, the same user name can log in remotely at the same time.

Control Level

The lowest number will be allowed to have the first priority to setup, control, etc... remotely.

Accessible Channels

Select the channels that the user is allowed to view remotely.

Playback Application (Search)

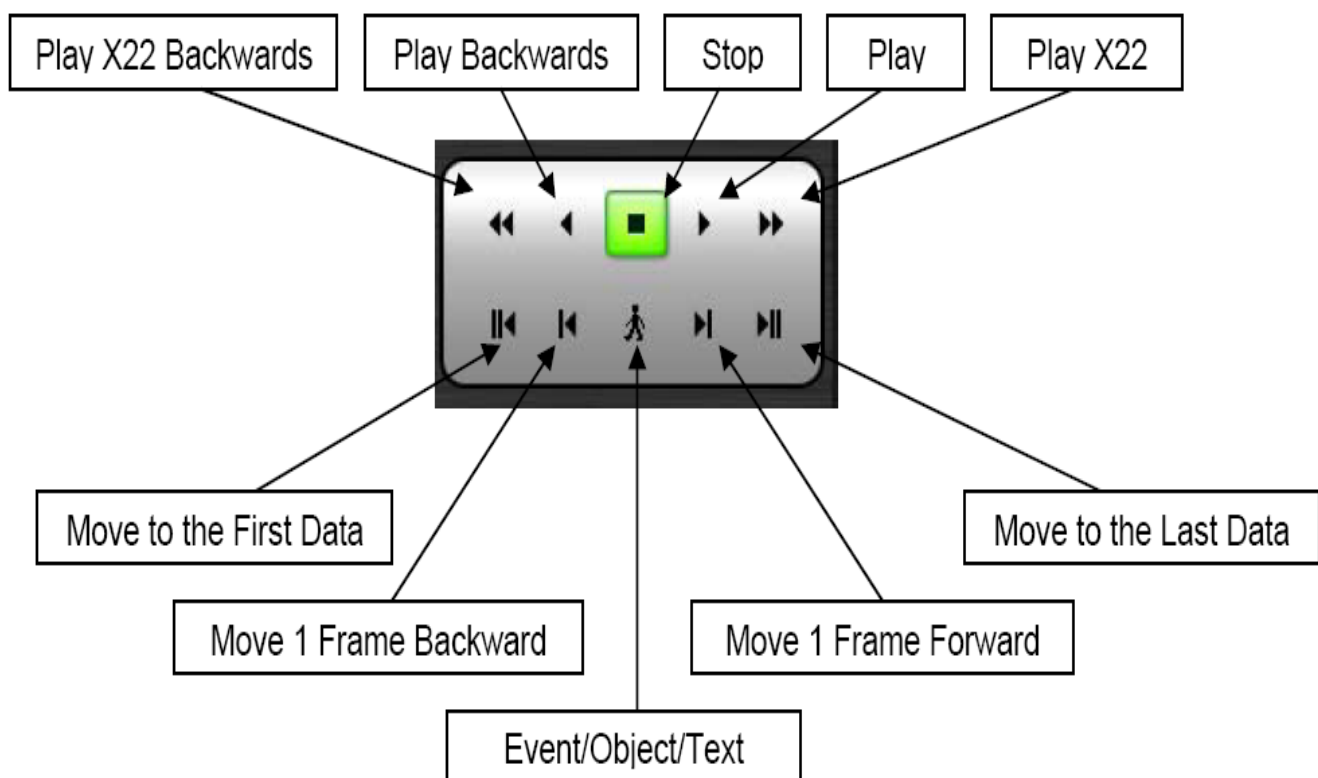
Search Features (Section 4)

For playback, simply select date, screen mode (1, 4, 9, 16, etc.), time by one click on the time bar and click the play button.

What different colors mean on the time bar:

- Blue: Recorded data by sensor & motion detection
- Purple: Recorded data by 24-hour-recording
- White: No recorded data in all cameras
- Gray: No recorded data for some cameras
- Green: Blue + audio
- Light Green: Purple + audio
- Dark Red: Purple + recorded text data (POS)
- Orange: Even- recorded data with recorded text data.
- Dark Yellow: Event-recorded data + recorded text data + audio
- Yellow: Purple + recorded text data + audio

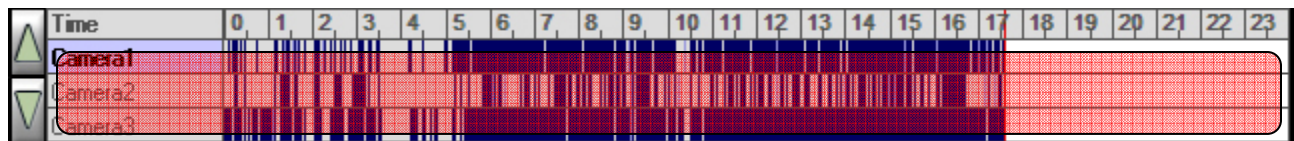
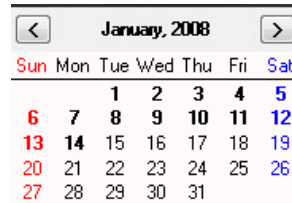
4.1 Playback



4.1.1 Searching

Searching recorded data is as easy as 1 - 2 - 3

Step 1. Select the date



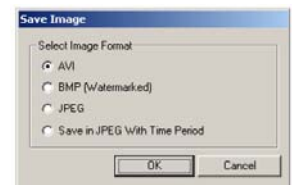
Step 2. Select the time. To activate the “GO TO” Time, right click anywhere on the time line (shown in the red area) and select desired time to search and select OK.

Step 3. Click on the play button



4.2.1 Save

- AVI: For saving motion pictures and audio (see “Backup” to burn to CD)
- BMP: For saving images, Watermarked images can be saved.
- JPEG: For saving regular still images. Quality is not as good as BMP but less HDD is used.



4.2.2 Save in AVI Format

- Select a location where you want to save the AVI file
- Click “Start” to start saving and “Stop” to stop saving
- Mute: Saving video only (no audio)
- High Speed: Saving in high speed



4.2.3 Save in BMP Format (Watermark)

BMP picture contains watermark, to verify a watermark, use the “Watermark Proofer” software provided with the client install software



Watermark Video

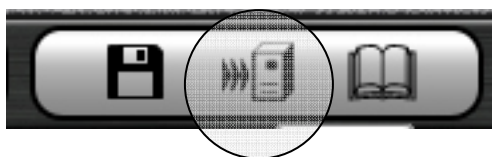
Video are recorded in an encrypted video called DFS. Only DFS video is watermarked and can only be played using DVR playback software. DFS video cannot be altered in any kind of way & DFS video also has a date and time stamp.

EXE & AVI backup are not considered as a watermark backup

4.2 Backup to CD-R (Burn to Disc)

SKY I SYS recommend that all backups are done from the server and using a CD-R. Doing otherwise without creating the proper folder will result in losing data on your personal computer, including personal files.

Step 1. Select the Backup Button & this window will appear, just click on next.



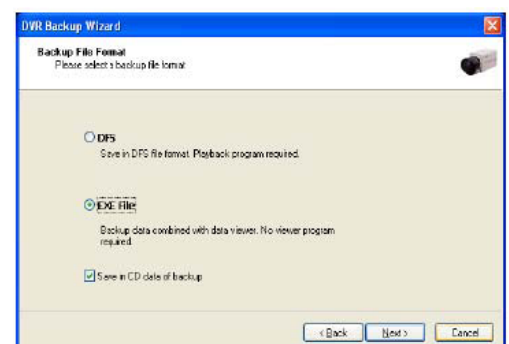
Step 2. Select either DFS or EXE file, SKYISYS recommends to backup as EXE; don't forget to check box the Save to CD data of backup. DFS and EXE file are explained in section 4.3.



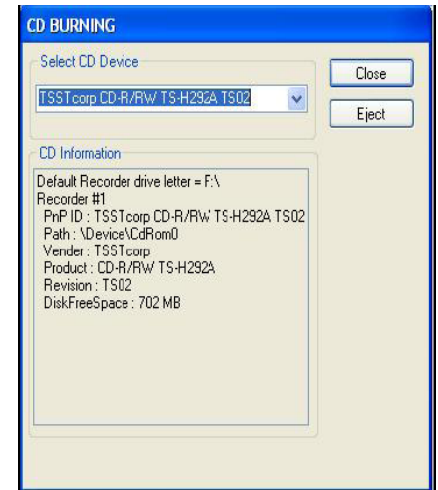
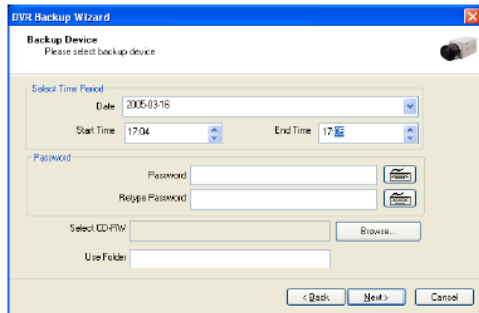
Save in CD data of backup



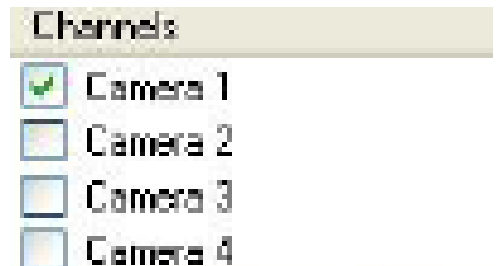
Please insert a blank CD-R NOW



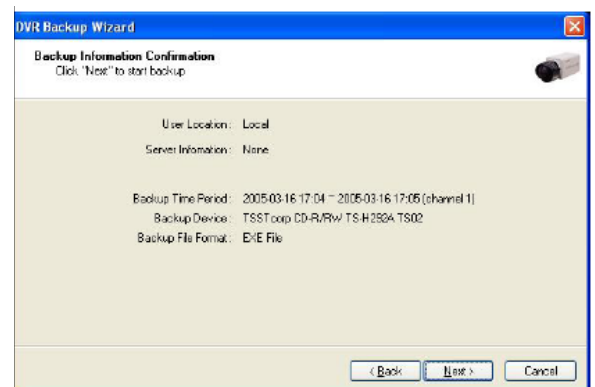
Step 3. Select the time & date of the incident. Select the start time and end time. Password is not required; this is only if you want to set a password on the backup video. Select browse, a window shown right will appear, confirm CD-R Information and click on close.



Step 4. Select the channel (camera) number to backup



Step 5. Confirm and click on next, if you need to make corrections, just go back.



Backup will start automatically and the DVR system will eject the disc when finish. If you get errors, the backup time you selected maybe larger than the 700MB CD-R capacity, if so just redo and just reduce the time period between the start and end time.



4.3 DFS & EXE

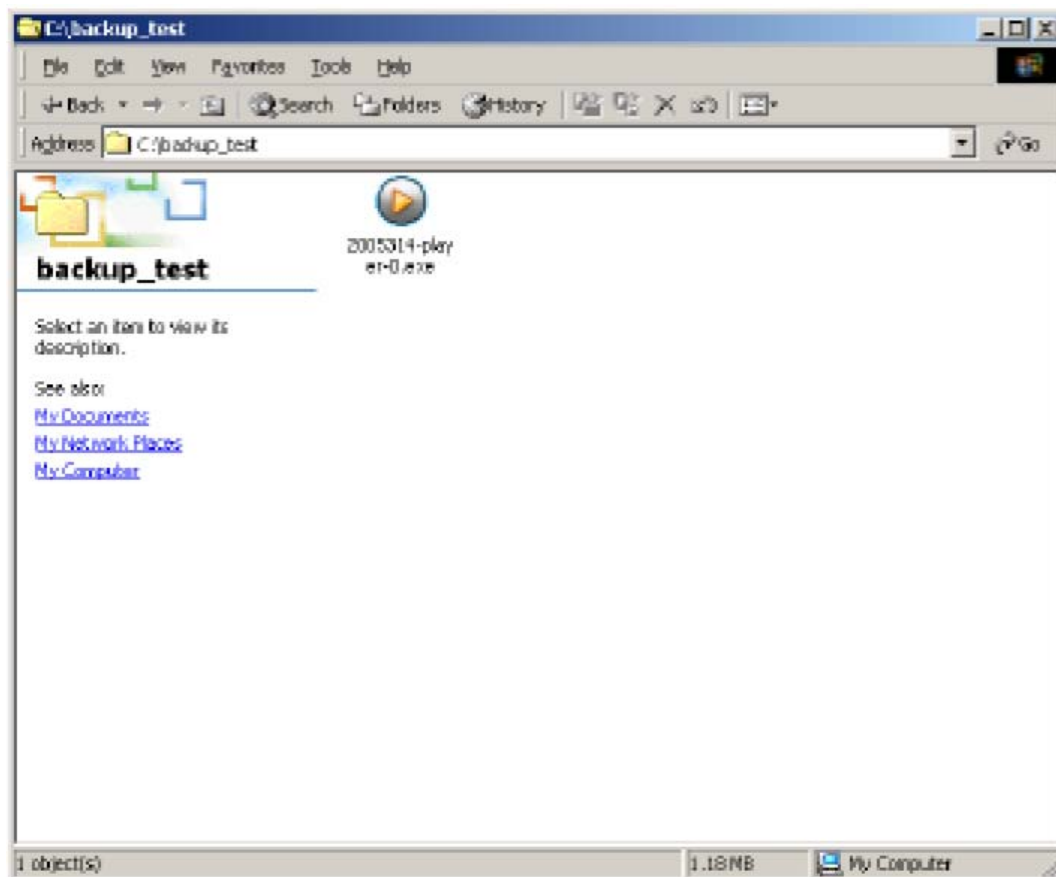
Remember to create a folder for these file system if you are not backing the video data to a CD-R, otherwise will result in lost of personal data on your personal computer.

4.3.1 DFS

DFS is a file system created by the DVR system to be playback using the DVR playback software. The advantage of the DFS file is that you can backup more than 1 camera at a single time; up to 16 cameras. The disadvantage of the DFS file system is that you must install the client software and use the DVR playback software.

4.3.2 EXE

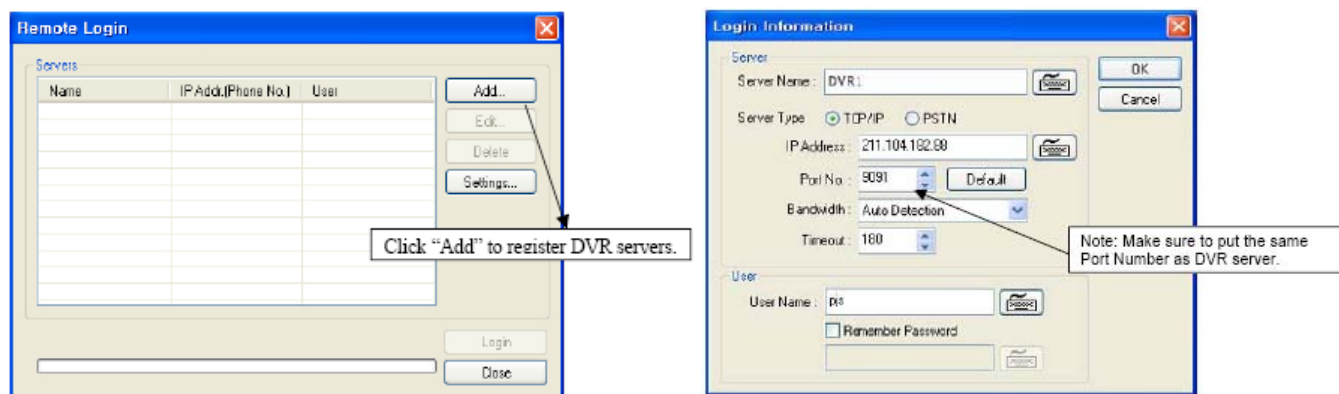
EXE is an executable file created by the DVR system to be playback without using any other software. The advantage of the EXE, any viewer can view the video without installing any software to playback video. The disadvantage of the EXE file system is that you can only backup 1 camera at a single time. Below shows you an example of an EXE file.



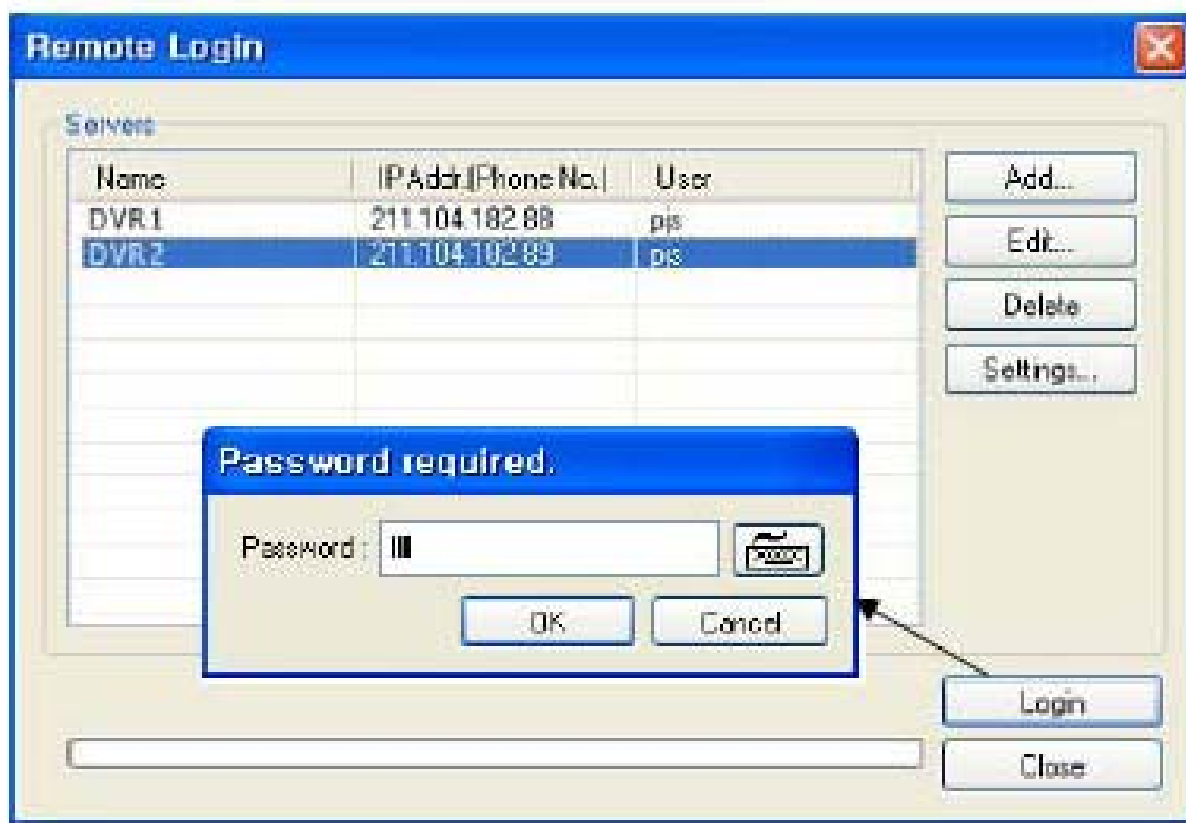
Remote Client Software

5.1 Client Program Execution

5.1.1 Adding a Location

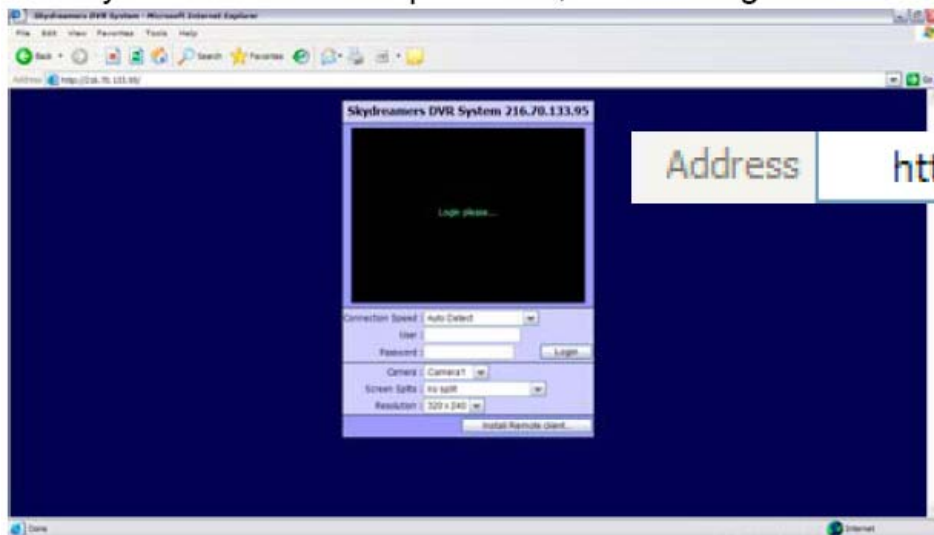


There can be more than one DVR server registered. Select one from "Servers", click on "Login" and type in the password if required. Edit if you would like to make changes.



5.2 Web Browser Execution

Launch Internet Explorer. On the address bar, put in the IP address for the DVR Server, enter your username and password, click on Login

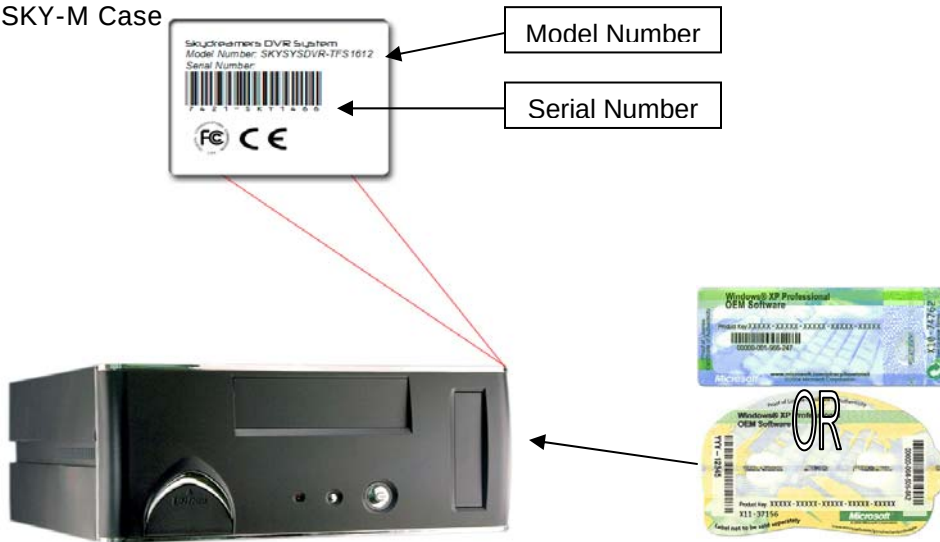


Identifying Your System Serial Number & Certificate of Authenticity for Microsoft Windows

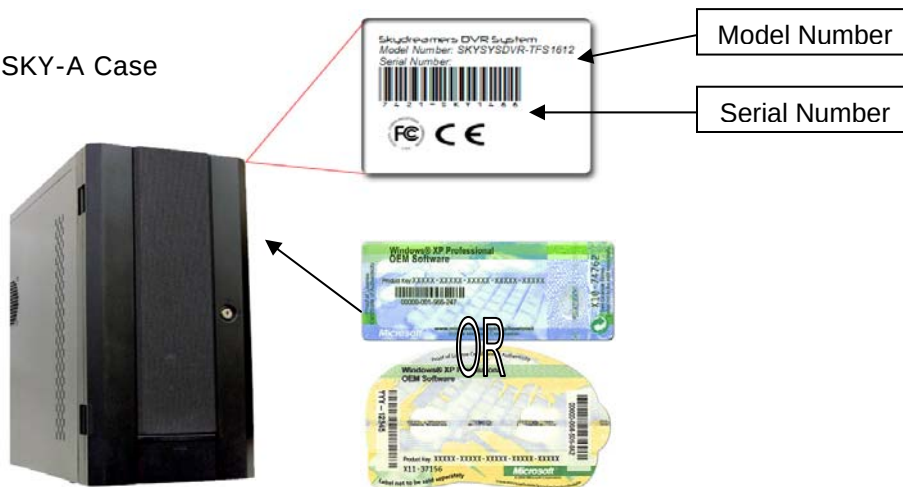
Skydreamers DVR Systems PCs use genuine Microsoft Windows
Check www.microsoft.com/piracy/howtotell



SKY-M Case



SKY-A Case



SKY-S Case

